

PREPARATION AND APPLICATION OF IMMUNOSTIMULATING MATERIAL TECHNOLOGY AGAINST COCCIDIOSIS

Aniolas Sruoga^{1,2}, Algimantas Paulauskas^{1,2}, Dalius Butkauskas¹, Jonas Skonsmanas, Elena Mozalienė¹, Sigita Slavėnaitė¹

¹ Vilniaus universitetas, Ekologijos institutas, Akademijos g. 2, Vilnius; tel. 272 9287; el. paštas: igl@eko.lt

² Vytauto Didžiojo universitetas, Vileikos g. 8, Kaunas; tel. 45 13 79; el. paštas: a.paulauskas@gmf.vdu.lt

Summary. The objective of this study was to select the most prevalent species of coccidia of high immunogenicity, to study and reproduce the selected coccidia species, and to prepare and test an experimental immunoprophylactic substance against coccidiosis.

Three widely occurring coccidia species were obtained from different farms: *Eimeria acervulina*, *E. maxima*, *E. tenella*. Common antigens were determined for all three species of *Eimeria*, and it appeared that *E. tenella* was the most virulent. *E. acervulina* shows cross-specific reaction with *E. praecox* and *E. brunetti*. Application of *E. acervulina* antigen may therefore offer an opportunity to build up immunity against less common species of coccidia. A new immunological substance for prophylaxis of coccidiosis in chickens was produced experimentally using three coccidia species and verification of its efficiency was carried out. 30,770 ten day old chickens were used for the test. The results showed that the immuno-prophylactic substance stimulated immunity against coccidiosis. Stability of postvaccination immunity against Newcastle disease in the experimental animals was 17% higher than in the control group. The immuno-prophylactic substance increased phagocytic activity of immunocompetent cells and slightly increased phagocytic index and strength.

The tests results indicate that this new immuno-prophylactic substance may help to build up life long immunity against hen coccidiosis.

Keywords: immunostimulating material, coccidia, *E. acervulina*, *E. maxima* ir *R. tenella*.